



# Native Trees for a Changing Climate

(Twin Cities urban and suburban areas)

## Why Plant Trees in Urban and Suburban Areas?

Planting trees enhances our communities and the environment by:

- filtering out air pollution,
- providing habitat and food for birds and pollinators,
- enhancing stormwater retention, and
- generally improving human wellbeing.

These benefits and ecosystem services will enhance our communities and make them more resilient to the changing climate.

## Right Tree Right Place

Picking the right species will leave a legacy for future generations, as some of these trees can survive hundreds of years.

It is critical to know your site's land use history and how it may have been impacted. Dig in to test soil texture (sand/silt/clay), level of compaction, and presence of organic matter.

Then consider both the amount of sun available now and in the future as surrounding trees mature and expand their leaf canopy.

Select trees from our recommended list that best match your site conditions.

*Note: The below trees are recommended solely for our altered urban and suburban ("built world") landscapes and roadsides in order to optimize urban forest resilience in anticipation of a changing climate. Ecological restorations of natural areas would likely include few of the trees from this list.*

**Red Maple** (*Acer rubrum*): Full sun to part shade. Prefers mesic to wet soil moisture; has some drought tolerance but avoid planting on hot, dry boulevard. Shade tolerant. Sensitive to salt spray. Flood tolerant. Can tolerate soil that drains poorly. Tolerates compacted soil.

**Silver Maple** (*Acer saccharum*): Tolerant of a wide range of soil types and conditions, and compaction. Needs room to grow. Fast growing. Mature canopy provides dense shade.

**Allegheny Serviceberry** (*Amelanchier laevis*): A good boulevard tree. Shorter tree that grows to a maximum of 25 feet. Edible fruits enjoyed by both humans and birds. White flowers in spring and red fall color.

**River Birch** (*Betula nigra*): Well adapted to a wide range of soil types and conditions, and compaction. Fast growing. Decorative bark. Heat tolerant.

**American Hornbeam** (*Carpinus caroliniana*): Also called blue beech although not in the beech family. Tolerates shade. Good fall color. Understory tree.

**Bitternut Hickory** (*Carya cordiformis*): Good fall color. A moderately long-lived tree. Needs room to grow. Resilient climate change tree. Forms extensive tap root.

**Shagbark Hickory** (*Carya ovata*): Long-lived but slower growing tree. Good boulevard tree. Produces edible nuts. Interesting bark.

**Hackberry** (*Celtis occidentalis*): Good tree for urban plantings. Tolerates full sun to full shade. Drought tolerant. Extremely hardy. Attractive corky, ridged bark.

**Eastern Redbud** (*Cercis canadensis*): Not native to metro area. Very ornamental. A smaller understory tree. Prefers shade to part shade. Blooms in spring.

**Pagoda Dogwood** (*Cornus alternifolia*): An understory tree. Prefers shade to part shade. Cool, well-drained, acidic soils. A very high wildlife value tree. Unique horizontal branch pattern offers winter interest. Profuse spring blossoms, late summer berries, and good fall color. Fruit highly sought after by birds.

**Honeylocust** (*Gleditsia triacanthos*): A hardy urban/boulevard tree. Tolerant of salt spray and soil salts.

**Kentucky Coffee Tree** (*Gymnocladus dioica*): A hardy urban/boulevard tree. Drought resistant. Tolerates challenging sites.



Photo by Leslie Pilgrim

**Witch Hazel** (*Hamamelis virginiana*): A small understory tree that tolerates shade. Unusual for its flowers that bloom from early to late fall.

**Black Walnut** (*Juglans nigra*): Good tree for challenging sites. Drought tolerant. Tolerant of a wide range of soils.

**Eastern Red Cedar** (*Juniperus virginiana*): Also called juniper. Good source of bird food. Good for screening. Drought tolerant.

**Ironwood** (*Ostrya virginiana*): Also called Eastern hophornbeam. Shade tolerant. Pest resistant. Hardy. Decorative hop-like fruits.

**Eastern White Pine** (*Pinus strobus*): An iconic Minnesota tree. Deer browsing can be a problem. Fast growing/long-lived. High wildlife value.

**Eastern Cottonwood** (*Populus deltoides*): Fast growing tree that prefers moist areas near lakes and streams. Needs room to grow.

**American Wild Plum** (*Prunus americana*): A small tree/tall shrub. Can form dense thickets with time. High wildlife value. Produces plums in the late summer. Showy spring flowers.

**Pin Cherry** (*Prunus pensylvanica*): Fast growing small tree. High wildlife value. Showy spring flowers attract a diversity of pollinators.

**Black Cherry** (*Prunus serotina*): High wildlife value. Showy spring flowers. Tolerates some shade. Fruit attracts many bird species.

**White Oak** (*Quercus alba*): Very long-lived tree. High wildlife value. Very drought resistant. Slow growing.

**Swamp White Oak** (*Quercus bicolor*): Slow growing. Relatively long-lived. High wildlife value. Prefers moist soil. Moderate drought tolerance.

**Northern Pin Oak** (*Quercus ellipsoidalis*): Smaller of the oak species. Fast growing. Tolerates moist soil. Shade tolerant. Hardy boulevard tree. Susceptible to oak wilt so give room to grow far from other red and pin oaks.

**Bur Oak** (*Quercus macrocarpa*): Iconic/beloved tree of the Minnesota oak savanna. Very high wildlife value. Tolerates a wide range of soil types. Very drought tolerant. Keystone species.

**Northern Red Oak** (*Quercus rubra*): One of the faster growing oaks. High wildlife value. Susceptible to oak wilt so give room to grow far from other red and pin oaks. Shade tolerant.

**Black Oak** (*Quercus velutina*): Very drought tolerant. Shade and flood intolerant. Sensitive to salt spray. High wildlife value.

**American Bladdernut** (*Staphylea trifolia*): A fast-growing, small, flowering understory tree. Produces suckers to reproduce. Tolerates average, dry, or medium, well-drained soils in part shade to full shade. No notable insect or disease problems.

**American Basswood** (*Tilia americana*): Also called linden. Flowers midsummer rather than spring. Good boulevard tree. Tolerates some shade. Fast growing.

**American Elm** (*Ulmus americana*): Iconic, stately boulevard tree no longer planted due to Dutch elm disease. Disease resistant cultivars available but none recreate the magnificence of the original native elm. Like the native, cultivars are fast-growing, hardy, and climate tolerant.



Eastern Redbud • Photo by Heather Holm

Some of the species we love are no longer recommended due to our changing climate. Rather than recommending sugar maple and paper birch, for example, which will likely be overstressed in these new conditions, the trees listed are limited to those more likely to persist without human care—such as regular irrigation during an extended drought.

You can select smaller species that reliably produce fruit we can share with our avian friends (serviceberry, plum), delicious nuts for us (shagbark hickory, walnut), or tremendous wildlife and pollinator food (maple, hornbeam, bitternut hickory, all the oaks, pine, and cherries).

Many of the trees on this list also produce delightful spring blossoms that support a diversity of pollinators as well as fall leaf color.

If you don't have enough space to add trees in your own yard, check with your local community forester about adopting a nearby turf grass or city park.



Serviceberry • Photo by Holley Wlodarczyk

Thank you to Douglas Owens-Pike and Heather Holm for the tree list.